



Trade &
Investment
Mine Safety

(DEP)

NSW Coal Competence Board

EXAMINATION FOR CERTIFICATE OF COMPETENCE AS DEPUTY

(Coal Mine Health & Safety Act 2002)

WESTERN REGION
SOUTHERN REGION
NORTHERN REGION

Tuesday 26 February 2013

10am to 12.30pm

Coal Mining Practice and Legislation

INSTRUCTION TO CANDIDATES

All five (5) questions are to be attempted.

All questions are of equal value - **20 marks each**.

10 minutes reading time is allowed prior to the start of the examination.

Question 1 (total 20 marks)

(a) Gas Chart (12 marks)

Gas	Relative Density	Explosive Range	Source in Coal Mines	Chemical Symbol
Methane				
Carbon Dioxide				
Carbon Monoxide				
Oxygen				
Hydrogen Sulphide				

(b) What are the major constituents of air and their proportions by volume? (5 marks)

(c) What is meant by the following terms (3 marks)

- Blackdamp
- Layering
- CO make

Question 2 (total 20 marks)

Clause 18 of the *Coal Mine Health and Safety Regulation 2006* deals with Monitoring Arrangements.

(a) What are five elements covered in this clause? (10 marks)

(b) What is meant by the following terms in this clause – (total 5 marks)

- Face machine
- Gas content

(c) What are the specified methane alarm/trip levels for – (total 5 marks)

- Longwall
- Diesels in the return
- Face machine

Question 3 (total 20 marks)

You are a Deputy at a mine working 9 hour shifts. You have arrived in a two-heading L/W gate road development at the start of your shift. A 100m panel extension (fan, conveyor, DCB and services) commenced on the previous shift.

(a) How would you determine where the job was up to? (3 marks)

(b) What safety instructions would you give the crew at the start of the shift? (3 marks)

(c) What equipment would be used during the panel move? How would you, as the Deputy, know that people are competent to use the equipment? (3 marks)

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- (d) What isolation would be used during the job? (4 marks)
- (e) What steps would you take, as Deputy, to ensure the jobs are carried out safely? (4marks)
- (f) If the job was not completed at the end of your shift what actions would you, as Deputy in charge of the job, carry out? (3 marks)

Question 4 (total 20 marks)

You are the Deputy in a L/W production panel. You have a crew of nine on production and three men installing 8m cable bolts in the M/G belt road 80m outbye the face. One of the bolting crew has sustained a serious hand injury (amputation of the tip of the little finger and severe lacerations) when struck by a falling string of drill rods.

- (a) What are the immediate steps you would take? (6 marks)
- (b) Would you consider this a Clause 55 incident? (give reasons) (4 marks)
- (c) Would you continue production? (give reasons) (4 marks)
- (d) How would you investigate the incident? Include potential causes and actions to eliminate those causes. (6 marks)

Question 5 (total 20 marks)

Joseph Colliery is working two units with secondary extraction by pillar extraction. It has little methane with the returns normally less than 0.1% methane.

- a) In the table below complete the air quantities at points A to O, shown on the plan over the page. (5 marks)

A	B	C

D	E	F	G	H	I

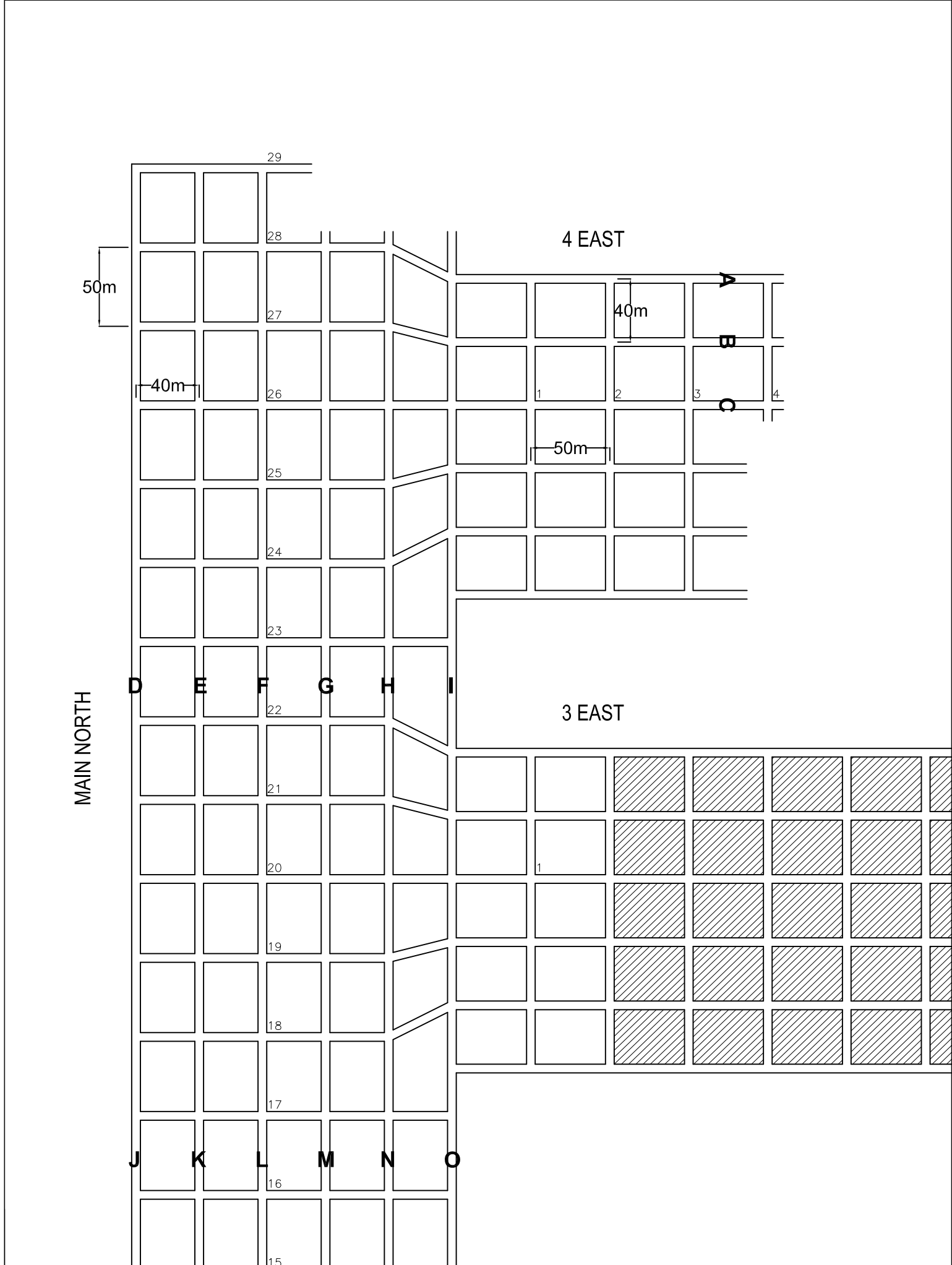
J	K	L	M	N	O

On the attached plan over the page show –

- b) Belt roads (2 marks)
- c) All ventilation control devices (5 marks)
- d) Direction of air flow - intakes and returns (4 marks)
- e) Explosion barriers (2 marks)
- f) Fixed monitoring points (2 marks)

END OF QUESTIONS

END OF PAPER



JOSEPH COLLIERY

SCALE : 1:3000